WHAT IS CLAIMED IS:

1.   A method to inhibit the growth of tumors in human patients, comprising treating the human patients with an effective amount of a combination of radiation and a non-radiolabeled protein receptor tyrosine kinase inhibitor, the overexpression of which can lead to tumorigenesis.

2.   A method according to claim 1 wherein the inhibitor is a monoclonal antibody or a fragment that comprises the hypervariable region thereof.

3.   A method according to claim 2 wherein the monoclonal antibody is chimerized or humanized.

4.   A method according to claim 1 wherein the inhibitor is a small molecule.

5.   A method according to claim 1 wherein the protein receptor tyrosine kinase is EGFR, PDGFR, TGF, IGFR, NGFR, or FGFR.

6.   A method according to claim 5 wherein the growth factor receptor tyrosine kinase is a member of the EGFR family.

7.   A method according to claim 6 wherein the member of the EGFR family is EGFR/HER-1.

8.   A method according to claim 6 wherein the member of the EGFR family is HER2.

9.   A method according to claim 6 wherein the member of the EGFR family is erbB3.

10.   A method according to claim 6 wherein the member of the EGFR family is erbB4.

11.   A method according to claim 5 wherein the growth factor receptor tyrosine kinase is a member of the PDGFR family.

12.   A method according to claim 11 wherein the member of the PDGFR family is PDGFRα.

13.   A method according to claim 11 wherein the member of the PDGFR family is PDGFRβ.

14.   A method according to claim 5 wherein the growth factor receptor tyrosine kinase is a member of the FGFR family.

15.   A method according to claim 14 wherein the member of the FGFR family is FGFR-1.

16.   A method according to claim 14 wherein the member of the FGFR family is FGFR-2.

17.   A method according to claim 14 wherein the member of the FGFR family is FGFR-3.

18.   A method according to claim 14 wherein the member of the FGFR family is FGFR-4.

19.   A method according to claim 5 wherein the growth factor receptor tyrosine kinase is a member of the IGFR family.

20. A method according to claim 19 wherein the member of the IGFR family is IGFR-1.

21. A method according to claim 5 wherein the growth factor receptor tyrosine kinase is a member of the TGF family.

22. A method according to claim 5 wherein the growth factor receptor tyrosine kinase is NGFR.

23. A method according to claim 2 wherein the monoclonal antibody is specific for EGFR/HER1.

24. A method according to claim 23 wherein the monoclonal antibody inhibits EGFR/HER1 phosphorylation.

25. A method according to claim 3 wherein the antibody is specific for EGFR/HER1.

26. A method according to claim 25 wherein the antibody inhibits EGFR/HER1 phosphorylation.

27. A method according to claim 4 wherein the small molecule is specific for EGFR.

28. A method according to claim 27 wherein the small molecule inhibits EGFR phosphorylation.

29. A method according to claim 2 wherein the tumors overexpress EGFR/HER1.

30.   A method according to claim 29 wherein the tumors are tumors of the breast, lung, colon, kidney, bladder, head and neck, ovary, prostate, and brain.

31.   A method according to claim 2 wherein the antibodies are administered before radiation.

32.   A method according to claim 2 wherein the antibodies are administered during radiation.

33.   A method according to claim 2 wherein the antibodies are administered after the radiation.

34.   A method according to claim 2 wherein the antibodies are administered before and during radiation.

35.   A method according to claim 2 wherein the antibodies are administered during and after radiation.

36.   A method according to claim 2 wherein the antibodies are administered before and after radiation.

37.   A method according to claim 2 wherein the antibodies are administered before, during, and after radiation.

38.   A method according to claim 2 wherein the source of the radiation is external to the human patient.

39.   A method according to claim 2 wherein the source of radiation is internal to the human patient.